



OPERATING INSTRUCTIONS



ULTIMA ZONE CONTROL



ULTIMA ZONE SENSOR

CONGRATULATIONS: on your purchase of an ActronAir air conditioning system. This unit has been meticulously designed and engineered to achieve maximum energy efficiency. It is manufactured from the highest quality materials which has passed numerous "in house" and "external" inspection procedures, ensuring years of satisfactory operation.

This user friendly Operating Instruction Manual is supplied to provide you with an understanding of the system. It includes step-by-step instructions on how to operate and maintain your system.

Please read this booklet thoroughly.

ACTRON ENGINEERING PTY LTD

General Information

YOUR ACTRONAIR ESP ULTIMA SYSTEM IS A STATE OF THE ART PRODUCT with advanced Microprocessor Control that automatically controls and regulates conditioned air in each zone to provide year-round climate control and comfort.

INSIDE THIS MANUAL You will find instructions for Zone Controller used with ActronAir ESP Ultima system. Functions of Master Controller, AM24-8Z and AM7-D8 in connection with ESP Ultima operation, are also explained.

NOTE: Basic and detailed functions of Master Controller, AM24-8Z and AM7-D8, are explained in operation manual (0500-005) supplied with your A/C units.

ACTRONAIR ESP ULTIMA SYSTEM is a highly advanced and efficient VAV system that lets you control the temperature of each zone. It is also used in conjunction with ECM (Electronically Commutated Motor) indoor fan and ActronAir ESP digital compressor technology for maximum energy savings and comfort.

IMPORTANT To ensure efficient and proper operation of your equipment, read and understand all instructions. Failure to do so may result in damage of equipment and warranty maybe void.

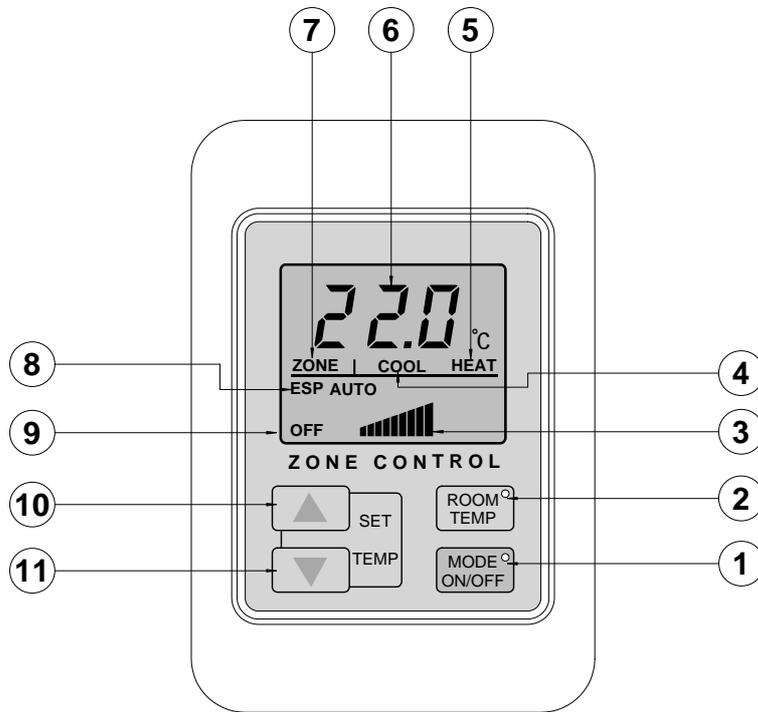
Contents

General information.....	Page 1
Zone controller functions.....	Page 2
Turning zone control ON.....	Page 3
ESP Auto mode.....	Page 4
Zone damper blade indicator.....	Page 5
Fan Only Mode.....	Page 6
Zone temperature display.....	Page 8
Zone open mode.....	Page 10
Troubleshooting.....	Page 11
Frequently Asked Questions.....	Page 12

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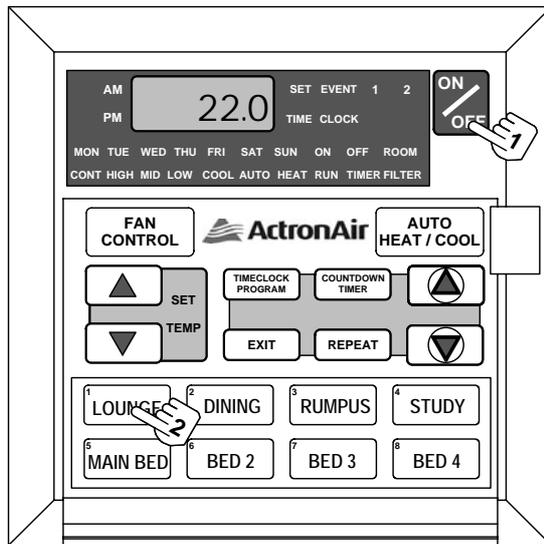
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Zone Controller Functions

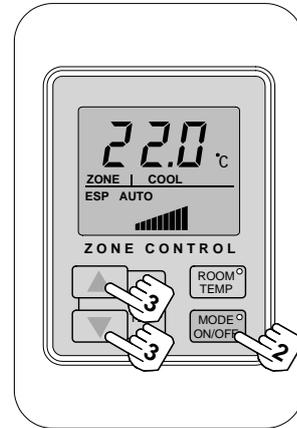


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|--|---|
| <p>① MODE ON/OFF button
Turn the zone ON or OFF.</p> <p>② Room temperature button
View actual room temperature.</p> <p>③ Damper position indicator
Indicates the position of zones air damper. (shown fully open)</p> <p>④ COOL indicator
Illuminates when zone is receiving cooling.</p> <p>⑤ HEAT indicator
Illuminates when the zone is receiving heating.</p> <p>⑥ Temperature Set Point display</p> | <p>⑦ ZONE indicator</p> <p>⑧ ESP AUTO indicator
Illuminates when the zone control is modulating the airflow.</p> <p>⑨ OFF indicator
Illuminates when zone is off and damper is fully closed.</p> <p>⑩ Set Temperature button
Raises the set point for warmer temperature.</p> <p>⑪ Temperature setting button
Lowers the set point for cooler temperature.</p> |
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TURNING ZONE CONTROL ON



MASTER CONTROLLER



ZONE CONTROL

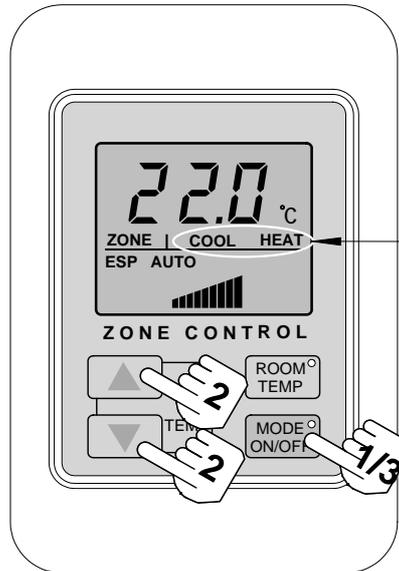
- 1** Turn the system ON by pressing the  button on Master Controller (AM7-D8 or AM24-8Z).
- 2** To turn the zone ON, press the  button on the Zone Control or alternatively; Press the designated zone on Master Controller.

 Zone Control display will show the SET TEMPERATURE, ZONE and ESP AUTO .
- 3** Set the desired temperature by pressing either UP or DOWN arrow keys on the Zone Controller. *
 - For warmer room temperature, press the UP arrow key.
 - For cooler room temperature, press the DOWN arrow key.

NOTES

- * Zone Control temperature setting can only be adjusted 2 °C below or above the Master Controller set point temperature. This is a factory set limit. Recommended to maintain system accuracy and maximize efficiency. Should this require changing contact ActronAir Technical support on free call 1800 119 229.
- Master controller shown above is AM7-D8, same procedure will be followed for AM24-8Z model.

ESP Auto Mode



Indications of Cool or Heat will show zone conditioning. (When zone damper is providing warm or cold air to your zone.)

1 Press the  button on until **ESP AUTO** appears on the display.

2 Set the desired temperature by pressing either **UP** or **DOWN** arrow keys.

- For a warmer room temperature, press the UP arrow key.
- For a cooler room temperature, press the DOWN arrow key.

Turning Off

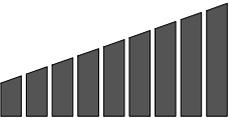
3 Press the  button to turn off the zone. Or alternatively, press the designated zone button on the Master Controller.

When the designated zone LED in the master control turns OFF, the zone is OFF.

Notes

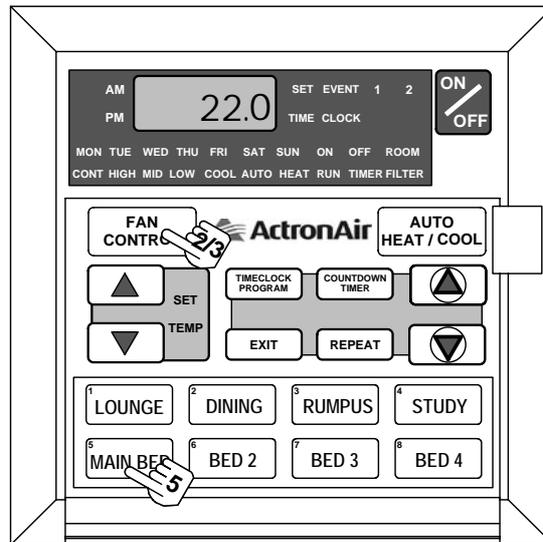
- In Zone Control ESP AUTO mode, the controller will adjust the position of zone damper automatically in order to meet the desired set temperature.
- Heating mode will be displayed when the zone starts to heat the room. Cooling mode will be displayed when the zone starts to cool the room.

Zone Damper Blade Indicator

Display	Status
	<p>FULLY OPEN DAMPER BLADE</p> <p>Allows full airflow through to meet your required conditions.</p>
	<p>PARTIALLY CLOSED DAMPER BLADE</p> <p>Regulating air and temperature to meet set conditions.</p>
	<p>PARTIALLY OPEN DAMPER BLADE</p> <p>Regulating air and temperature to meet set conditions.</p>
	<p>NO DAMPER BLADE INDICATOR</p> <ul style="list-style-type: none"> • Room is satisfied with temp. • Zone is turned off • Zone is waiting on Heat/Cool mode change.

When in ESP Auto, damper blade indicator will automatically adjust itself to regulate the correct amount of airflow (heat or cool) to maintain the desired setpoint temperature.

FAN ONLY CIRCULATION MODE

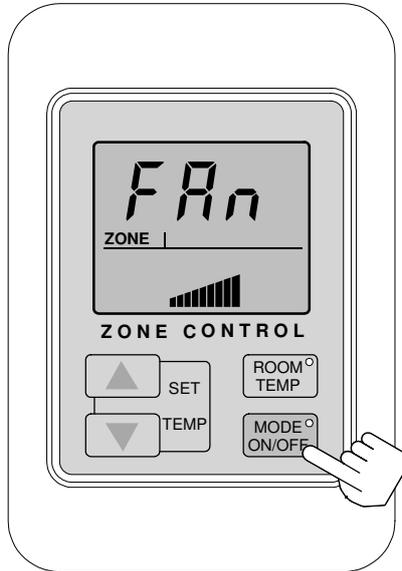


- 1** Ensure your air conditioner is turned off.
- 2** Press the **FAN CONTROL** button. Fan LED will illuminate on screen.
- 3** Press **FAN CONTROL** again to select **HIGH, MID** or **LOW** fan speed.
- 4** All zones will open to circulate air throughout your home.
- 5** If you wish to shut the zone in any particular rooms in this mode, simply turn off zone by pressing the zone buttons. Zone LED will go off.

NOTES

- This mode is commonly used to circulate airflow without Cooling or Heating throughout the home.
- Quite often used on mild days to circulate fresh air through the home. Simply open a few windows and let the **FAN ONLY MODE** circulate fresh air through the home.

Fan Only Mode



FAN MODE

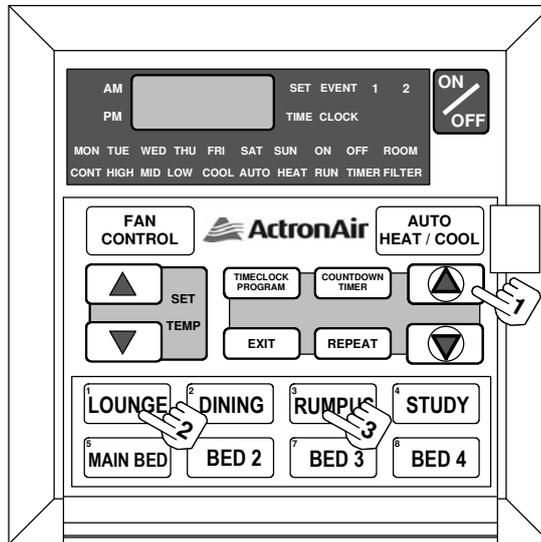
FAn will be displayed on zone control display when the master wall control is set to circulation operation. During this period, zone damper will be in fully open position for maximum air circulation.

Press MODE/ON/OFF button to turn OFF the zone damper.

If you do not want the unit to circulate airflow in your room in this mode, simply push the ON/OFF button in your zone controller or turn your zone OFF at the master control.

Zone Temperature Display

TO CHECK TEMPERATURE AT MASTER CONTROLLER



Average Room Temperature Display

- 1 Press  button in the TIMER section and the average room temperature will be displayed for 3 seconds.

"ROOM" LED flashing means the temperature displayed is the average of all activated zone sensors.

Checking Individual Zone Temperatures

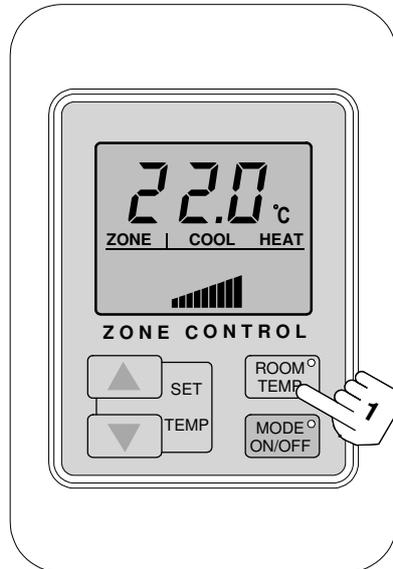
- 1 Press  button in the TIMER section
- 2 While "ROOM" LED is flashing, press the zone to be checked.
 - The "ROOM" LED turns off and the selected zone LED flashes.
 - During this time, the selected zone temperature is displayed.
- 3 To check another zone, simply press the zone button while "ROOM" or zone LED is flashing.

Notes

Room temperature displayed can be the temperature at a zone control or at a remote sensor or the average of both depending on installation.

Zone Temperature Display

TO CHECK ZONE TEMPERATURE AT ZONE CONTROLLER



1

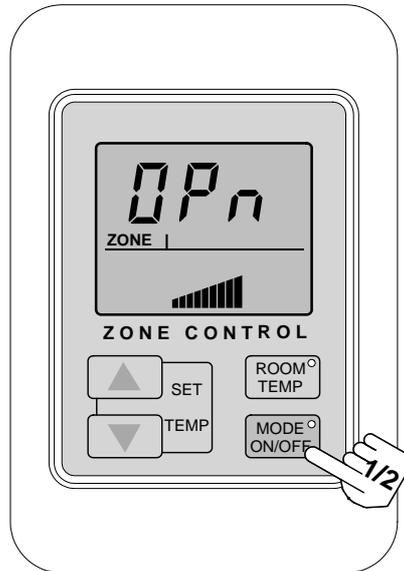
Press the  button.

Actual room/zone temperature will be displayed for several seconds then returns to set point temperature. During this period, the blue LED will flash when display is showing the room temperature.

Notes

- To display the room temperature for 45 minutes, press and hold ROOM TEMP button for 5 seconds.
- The room temperature display can be the temperature at the zone controller or the average of both zone control and remote sensor depending on installation.

Zone Open Mode



- 1** Press the  button twice in quick succession until OPn appears in the display screen.

OPn will appear on the display. Zone damper blade will be in maximum open position.

Turning Off

- 2** Press the  button to turn off the zone. Or alternatively, press the designated zone button in the master wall control.

Notes

- It is not possible to control or adjust the temperature in this mode.
 - This zones temperature now will depend on the systems operating mode (Heat or Cool).
 - This mode has no control on room temperature, your sensor is ignored in this mode.
- A zone in OPn mode is like having a non temperature controlled ON/OFF zone damper.
- Zone 1 cannot be put in OPn mode.

Troubleshooting

Conditions	Remedy
<p>The system does not start.</p>	<ul style="list-style-type: none"> • Check that 5 minutes has passed from the time you turned the system on as there are in-built safety timers. • Check thermostat settings are correct. • Check thermostat set point is low enough for cooling or high enough for heating. • Check the Master Controller is set to the correct mode for COOL/AUTO/HEAT.
<p>Air does not flow.</p>	<ul style="list-style-type: none"> • Check if the unit is set in the correct mode COOL/AUTO/HEAT. • Check your zone control is turned on. If using sensor ensure your zone is on at the master. • During defrost cycle of the outdoor unit in heating mode, the indoor fan will not operate. Defrost cycle is indicated when the heat LED on the master control is flashing.
<p>OFF is displayed on my zone control and I can not turn it on.</p>	<ul style="list-style-type: none"> • This means the Master Controller is turned off. First turn on your air conditioner at the master control. You will now be able to turn on your zone control.

For any assistance with your ESP Ultima System do not hesitate to contact our Customer Care Team. Freecall Technical Support 1800 119 229.

Frequently Asked Questions

Q. I can not adjust my set point on my zone controller any more than 2 degrees higher or lower than the master controller.

A. 2 degrees is the the default setting for master temperature offset. ActronAir recommend this 2 degree offset to optimise temperature control and maximize energy efficiency. Moving this settings outside +/-2 degrees will result in temperature inaccuracy. Contact ActronAir technical support on Tel. No. 1800 119 229.

Q. Cooling and Heating seems to take a long time to achieve temperature in ESP fan mode. Am I using the correct settings?

A. ESP fan mode really comes into it's own when minimal zones are used. For quicker and more responsive Cooling and Heating when using more than minimal zones, select High or Cont High fan speed on the master control. This will boost heating and cooling and is best optimized when you want to condition more than the minimal zone set up.

Q. Cooling and Heating is not sufficient in my zone.

A. Air balancing is essential part of system commissioning in Ultima system. The duct design may be prohibiting the correct amount of airflow reaching your area. Please contact your installer to ensure air balancing has been carried out.

Q. There is substantial air noise coming from my outlet.

A. If the outlet gets too noisy when the unit or zone is first turned on, the system maybe over supplying airflow to your area. Ensure ESP fan mode is used when using minimal zones. Please contact your installer to ensure air balancing has been carried out.

Q. There are dashes across my control display.

A. Make sure you have not had a power cut out. If this is still present on the display after 20 seconds, please contact your installer. Incorrect wiring or a broken circuit could also cause these symptoms.

Fault Codes.

When **E?** is displayed in the master controller or zone control, take note of the the digits after E and contact your installer.

E3 - System has detected less than 2 sensors (Ultima requires at least 2 sensors in circuit) or, a Remote Sensor is short circuit.

E5 - No Communication. The system is constantly relaying information back and forth. This indicates that communication is not happening. Contact your installer to check your wiring and cable's integrity.

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